

Brown County

Estimated Economic Contribution of Agriculture, Food, and Food Processing Sectors 6/25/2019

Using the most recent IMPLAN data available (2017) adjusted for 2019, 22 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Brown County economy.¹

These 22 sectors have a total direct output of approximately **\$621.5 million** and support **1,197 jobs** in Brown County. Running the model for all 22 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Brown County Economy					
Contribution Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵
Direct Effect	1197.4	16.78%	\$153,983,041	27.80%	\$621,546,948
Indirect Effect	430.2	6.03%	\$39,562,736	7.14%	\$76,267,807
Induced Effect	316.4	4.43%	\$22,420,125	4.05%	\$43,164,635
Total Effect	1944.0	27.25%	\$215,965,902	38.98%	\$740,979,390

As shown in the above table, agriculture, food, and food processing sectors support **1,944 jobs**, or **27.25%** of the entire workforce in the county.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 22 agriculture, food, and food processing sectors is approximately **\$215.9 million**, or **38.98% of the GRP**.

The following tables document the top industries affected by employment and output, as well as a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:

<https://implanhelp.zendesk.com/hc/en-us/articles/115002801513-Considerations-of-Contribution-Analysis>

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value added = labor income + indirect business taxes + other property type income.

⁴ GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

⁵ Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the food product machinery manufacturing sector is the top employer with **352 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Brown County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Food product machinery manufacturing	351.7	\$111,681,746
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	182.1	\$22,654,213
Grain farming	173.3	\$64,531,982
Dog and cat food manufacturing	166.0	\$206,941,867
Wholesale trade	143.2	\$31,875,158
Other animal food manufacturing	81.1	\$101,776,735
Oilseed farming	75.5	\$78,284,050
Farm machinery and equipment manufacturing	68.8	\$26,589,592
Other local government enterprises	60.0	\$14,432,698
Hospitals	40.2	\$5,982,225

The dog and cat manufacturing sector directly contributes approximately **\$206.9 million** to the Brown County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Dog and cat food manufacturing	166.0	\$206,941,867
Food product machinery manufacturing	351.7	\$111,681,746
Other animal food manufacturing	81.1	\$101,776,735
Oilseed farming	75.5	\$78,284,050
Grain farming	173.3	\$64,531,982
Wholesale trade	143.2	\$31,875,158
Farm machinery and equipment manufacturing	68.8	\$26,589,592
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	182.1	\$22,654,213
Other local government enterprises	60.0	\$14,432,698
Monetary authorities and depository credit intermediation	37.7	\$7,684,463

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Brown County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	75.5	\$78,284,049.99
Grain farming	173.3	\$64,531,982.42
Vegetable and melon farming	0.4	\$52,048.07
Fruit farming	1.3	\$71,202.43
Tree nut farming	0.0	\$25.56
Greenhouse, nursery, and floriculture production	6.4	\$564,512.37
All other crop farming	14.3	\$1,119,909.41
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	182.1	\$22,654,212.95
Dairy cattle and milk production	4.2	\$1,111,240.86
Poultry and egg production	0.9	\$500,146.63
Animal production, except cattle and poultry and eggs	10.5	\$1,183,404.92
Commercial logging	1.5	\$38,795.84
Commercial hunting and trapping	1.4	\$27,814.55
Support activities for agriculture and forestry	5.2	\$190,070.97
Dog and cat food manufacturing	166.0	\$206,941,864.01
Other animal food manufacturing	81.1	\$101,776,733.40
Bread and bakery product, except frozen, manufacturing	4.9	\$573,190.39
Frozen cakes and other pastries manufacturing	0.3	\$45,614.33
Farm machinery and equipment manufacturing	68.8	\$26,589,591.98
Food product machinery manufacturing	351.7	\$111,681,739.81
Veterinary services	13.0	\$1,324,177.03
Landscape and horticultural services	34.8	\$2,284,608.84

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Brown County, the retail sector was omitted.